

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

AD

PUBLICATION NUMBER : 03002338  
PUBLICATION DATE : 08-01-91

APPLICATION DATE : 30-05-89  
APPLICATION NUMBER : 01134703

APPLICANT : SUMITOMO ELECTRIC IND LTD;

INVENTOR : TAKEDA YOSHINOBU;

INT.CL. : C22C 1/09

TITLE : COMPOSITE REINFORCED ALLOY AND ITS MANUFACTURE

ABSTRACT : PURPOSE: To manufacture the novel composite reinforced alloy having high strength by incorporating carbon fiber having specified diameter and content into an oxide dispersion strengthened alloy contg. specified ratio of oxide grains having specified size distribution.

CONSTITUTION: By weight, 0.3 to 5% oxide powder ( $Y_2O_3$ ,  $Al_2O_3$  or their conjugate oxide) having the size distribution of  $\leq 0.4$  diameter in  $\geq 20$ vol.% is incorporated into a matrix (Ni alloy, pure Cu, Al alloy or Ti alloy) by a mechanical alloying method to manufacture mechanically alloyed powder. The mechanically alloyed powder is mixed with 3 to 35vol.% fiber having  $\geq 10\mu$  diameter of carbon fiber, silicon carbide whisker, silicon nitride whisker or that of which B or  $B_2C$  is chemically vapor-deposited onto the above, which is subjected to hot extruding at the temp. of the 1/2 or above of the m.p. of the mechanically alloyed powder. In this way, the novel composite reinforced alloy having high strength and suitable for manufacturing high function parts can be obtd.

COPYRIGHT: (C)1991,JPO&Japio

USPS EXPRESS MAIL  
EV 636 852 085 US  
JULY 12 2006